



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:
WW-16J

May 27, 2010

Ginger Mullins, Chief
Regulatory Branch
U.S. Army Corps of Engineers
Huntington District
Attn: CELRH-OR-F
502 Eighth Street
Huntington, West Virginia 25701-2070

Subject: LRH-2005-1385-TUS Halls Knob

Dear Ms. Mullins:

The U.S. Environmental Protection Agency, Region 5, has reviewed Oxford Mining's proposed Halls Knob mining project located in Millwood Township, Guernsey County, Ohio. The project proposes to impact 5,445 linear feet of stream (214 linear feet of perennial stream, 3,184 linear feet of intermittent stream, and 2,047 linear feet of ephemeral stream), 0.173 acre of jurisdictional wetland and 0.923 acre of jurisdictional open water through new mining activities, remining, and reclamation of historic abandoned mine areas. This permit application was selected as one of 79 permit applications for enhanced coordination announced pursuant to the June 11, 2009, interagency Memorandum of Understanding on Appalachian surface coal mining. In its September 30, 2009, announcement that this and other projects would be subject to enhanced coordination, EPA identified three areas of general concern: avoidance and minimization, water quality impacts, and mitigation. There are no valley fills associated with this mine.

Avoidance and Minimization

As originally proposed in the March 20, 2009, public notice, the project would have filled 9,306 linear feet of stream (214 linear feet of perennial stream, 6,269 linear feet of intermittent stream and 2,823 linear feet of ephemeral stream), 0.183 acres of wetland and 0.923 acres of open water. As currently proposed, stream impacts have been reduced by 3,861 linear feet (41%), from 9,306 linear feet to 5,445 linear feet. Wetland impacts have been reduced by 0.01 acre (5%) from 0.183 acre to 0.173 acre.

Oxford's original mine plan included 13 sediment ponds to reduce the amount of pollutants entering the surface water system from the mining operation. Streams 1, 2, and 7 would have been significantly impacted by construction of the ponds as originally proposed. Oxford has revised the application to construct 3 additional sediment ponds out of channel, so that the ponds associated with streams 1, 2, and 7 could be reduced in size, and to specify that the remaining instream ponds will be temporary and stream channels restored post mining.

In cases where springs are mined through, depending on the elevation of the coal seam, critical sources of hydrology are eliminated, thereby decreasing the chance for a the establishment of a diverse biological community in mitigated streams. Oxford's plan to stop the highwall at 100 feet in elevation and continue with auger mining does not adversely impact the springs, and will benefit both downstream water quality and the proposed stream reclamation.

Water Quality

This project is within the Wills Creek Watershed, which is listed on the State of Ohio's 303(d) list for aquatic life use impairment caused by sediment and siltation from surface mining sources. The directly impacted downstream water is an unnamed tributary (Stream 9) to Leatherwood Creek; neither of these has been assessed. The area has been partially impacted by previous pre-SMRCA mining. The applicant proposes to reclaim the entire site to current regulatory standards as set by ODNR-DMRM under SMCRA and return the land to its previous uses as requested by the landowner.

Ambient data collected by the company on April 12, 2010, showed conductivity levels ranging from 812 μ S/cm to 2,680 μ S/cm over 13 monitoring stations. The 39.5 acres of pre-SMCRA mining are suspected to be partly responsible for the high conductivity levels. The operation will eliminate an abandoned underground mine, that is a suspected source of acid mine drainage (AMD), and reclaim abandoned highwalls and old pit impoundments, which will improve water quality. During mining the use of Best Management Practices will help to prevent the degradation of water quality prior to reclamation of the site.

Mitigation

As mitigation for impacts to 214 linear feet of perennial stream, 3,184 linear feet of intermittent stream, and 2,552 linear feet of ephemeral stream, Oxford proposed to construct a minimum of 214 linear feet of perennial stream and 3,925 linear feet of intermittent stream using natural channel design, as well as 0.06 acre of wetland. As mitigation for impacts to 0.173 acres of non-forested/emergent wetlands, Oxford will construct a minimum of 0.32 acres of wetland.

EPA appreciates that Oxford identifies and restores pre-mined areas that are contributing to downstream water quality impairments. For this project, they will eliminate an abandoned underground mine that is a suspected source of AMD, and

reclaim abandoned highwalls and old pit impoundments. They have a proven track record of conducting this type of reclamation that will result in environmental improvement.

To account for temporal loss and the uncertainty of stream reclamation, Oxford will provide additional mitigation, consisting of at least 750 linear feet of stream restoration and protection of the area with a conservation easement. They will also identify additional areas for mitigation focused on chemical and/or biological improvements in the watershed.

Proposed Permitting Approach

EPA appreciates the efforts of Oxford and the Corps to incorporate provisions in the design of the Halls Knob mine intended to avoid and minimize the potential for increased water quality problems within the Wills Creek Watershed. Remining and reclamation on 39.5 acres of the site are intended to correct existing sources of conductivity currently contributing to exceedances of the state's water quality criterion for conductivity. We are concerned, however, that new mining and associated disturbance of 224.2 acres of land at the site, including new mine through operations impacting almost 5,500 linear feet of stream, will likely cause or contribute to additional exceedances and associated significant degradation of aquatic life in the already impaired Wills Creek Watershed. Current information available does not provide quantifiable data regarding the efficacy of reclamation efforts to ensure that new mining will not further elevate conductivity levels in the watershed.

In order to address this concern, and in an effort to allow some mining to proceed at the site as soon as possible, EPA recommends that the Corps proceed with phased permitting of the proposed mining operation as follows:

Phase I mining would be authorized to permit remining and reclamation to proceed immediately on the 39.5 acres of the Halls Knob site. The permit would require downstream monitoring of conductivity levels to evaluate the effectiveness of reclamation efforts to reduce existing conductivity levels in the watershed and to protect stream biota. The Corps, EPA, and the State should coordinate to assess any observed reduction in conductivity in waters below the remining/reclamation area as a part of the decision to approve subsequent new mining at the site under Phase II.

Phase II mining would involve the remainder of proposed mining at the Halls Knob site, including the mine through of 5,500 linear feet of stream. A decision whether or not to approve Phase II mining would be based on coordination among the Corps, EPA, and State to compare anticipated increases in conductivity in waters downstream of Phase II mining with the results of any observed improvement in water quality below Phase I remining and reclamation efforts, based on data collected during conductivity and biological monitoring. Phase II mining could be approved if the agencies determined that a combination of anticipated new mining water quality impacts and reductions in conductivity associated with repair of existing conductivity sources resulted in no net

increase in conductivity and related biological impairments in surface waters in the Wills Creek watershed.

Absent the adoption of a phased permitting approach described here, as well as the collection and utilization of this necessary information and analysis, EPA recommends that the permit application for the project, as currently proposed, be denied.

The combination of a phased mining approach, of reclaiming pre-SMCRA areas, reclamation of on site streams, additional on-site stream mitigation, extensive water quality and biological monitoring, use of best management practices, and an adaptive management plan for corrective action, will prevent this project from elevating pollutant levels in streams already impaired by previous mining and causing significant degradation to downstream waters. We believe the enclosed conditions are consistent with the agencies' Clean Water Act regulations, including the section 404(b)(1) Guidelines.

I want to thank you and your staff for your cooperation and willingness to address our issues. If you have any question, please call me, at 312-353-2147, or Wendy Melgin of my staff, at 312-886-7745.

Sincerely,



65 Tinka G. Hyde
Director, Water Division

Enclosure

cc: George Elmaraghy, Ohio EPA

Special Conditions

EPA appreciates the collaboration between the Region and the District on developing the special permit conditions. We believe this productive working relationship benefits both agencies in our effort to ensure that the chemical, physical and biological integrity of the nation's waters is maintained.

In addition to the conditions, the applicant is required, in the SCMRA permit, to implement Best Management Practices and reclamation methods for land disturbance, erosion and sediment control, revegetation and drainage. The proposed Section 404 special conditions, which EPA and the Corps have agreed upon, are listed below.

1. Conductivity shall be monitored on a monthly basis at upstream monitoring station U-9 and downstream monitoring station D-9. Other parameters to be monitored include flow, pH, temperature, dissolved oxygen, Iron, Aluminum, Selenium, TDS, TSS, Conductivity, Calcium, Potassium, Magnesium, Sulfate, Chloride, Sodium, and Total Alkalinity. The upstream monitoring point will be the reference point and the downstream station will be the compliance point.

Data shall be reported to the USACE and USEPA within 15 days of monitoring. After 6 months of data collection a time-series analysis of the data shall be performed to determine if conductivity readings are developing a trend. The analysis shall be reported to the USACE and USEPA within 30 days of the 6 month monitoring date. If the conductivity is trending upward a detailed reasoning for increased conductivity shall be conducted and included in the above analysis report.

The trend analysis shall begin upon site preparation for mining and take place every 6 months until reclamation is completed.

If an unexplained spike in conductivity reading takes place, the frequency of monitoring shall be increased to twice per month.

If corrective measures are necessary, the Adaptive Management Plan shall be implemented, which may require additional mitigation focused on chemical improvements in the watershed.

2. Habitat and aquatic biology shall be monitored twice between June 15 to September 30 at least 6 weeks apart at upstream monitoring station U-9 and downstream monitoring station D-9. During the sampling period, the company will determine if there is any change in QHEI, ICI, and IBI scores. Data shall be reported to the USACE and USEPA within 15 days of monitoring.

If the ICI or IBI scores show a negative change greater than 4 points an analysis with detailed reasoning for decreased biology will be required. The QHEI score shall be used to determine any change in the physical habitat. After a season (two complete monitoring reports) of data collection an analysis of the data shall be reported to the USACE and USEPA within 30 days.

If the QHEI score drops significantly or the ICI or IBI scores show a negative change greater than 4 points during to your mining operation, the Adaptive Management Plan shall be implemented, which may require additional mitigation focused on habitat or biological improvements in the watershed.

3. Yearly sampling shall be conducted on each of the thirteen sampling stations using the qualitative methodology described in the Primary Headwater Habitat Manual (HHEI) and the Headwater Macroinvertebrate Field Evaluation Index (HMFEI). HHEI and HMFEI scores shall be reported in the annual monitoring reports. The approved monitoring stations are documented on the Monitoring Station Map (Hall's Knob D-2334) dated 2/23/2010 which is attached (Attachment D). Baseline parameters shall be established prior to any site activity.

4. For temporal loss of stream functions on site, you shall submit an additional mitigation plan. The plan shall identify a minimum of 750 linear feet of stream channel on or off site as a mitigation site. The mitigation should include restoration/creation/enhancement and must include protection in perpetuity.

5. If water quality shows that the conductivity has exceeded Ohio's water quality standard for conductivity of 2400 $\mu\text{S}/\text{cm}$ or 1500 mg/l Total Dissolved Solids at downstream monitoring station D-9, mining must stop and the adaptive management plan must be implemented.

6. An Adaptive Management Plan (AMP) shall be developed and approved with 90 days of this authorization. This plan shall include activities initiated when there is a degradation of water quality or biology. If trend analyses indicate a degradation of water quality or biology, then the applicant will submit a report within 30 days to the USACE, and the USEPA and any other appropriate agency with a detailed list of proposed actions to address the increased conductivity or loss of biodiversity. The proposed actions shall also identify a timeline for the implementation of the action plan which shall be implemented following written approval by the USACE after consultation with the USEPA and other resource agencies. The potential techniques that may be employed include, but are not limited to, revisions to material handling plans, revisions to the storm water storage; grading and vegetation of reclaimed areas, addition of pretreatment ponds, and internal storm water diversion.

7. Additional Compensatory Mitigation shall be required for degradation of water quality which results in action under the Adaptive Management Plan. If monitoring indicates any upward trend in conductivity or downward trend in biology due to the mining activity additional mitigation focused on chemical and/or biological improvements in the watershed shall be provided. The requirement will be reset after 24 consecutive sample reports indicate results in normal limits of the baseline. The projects to which the additional compensatory mitigation can be applied will be defined in advance by the applicant and approved by the USACE in consultation with the USEPA and other resource agencies.

An additional proposed Section 404 special condition, which EPA and the Corps have not yet agreed upon, is listed below.

1. The permit shall allow mining to occur in 2 phases. Phase I would include the 39.5 acres of pre-SMCRA mined and unreclaimed portion of the project. Based on monitoring results and the success of reclamation in reducing existing conductivity and pH at monitoring station D-9, the Corps and EPA would determine whether the second phase (new mining) could be approved.